Job No. 22192

Written Response Required? NO Closes CCN: N/A

(1052055 049924

Environmental ERC Team Restoration Contractor Interoffice Memorandum

TO:

M. A. Buckmaster, H0-19

M. J. Galgoul, H9-03

DATE:

July 15, 1997

COPIES: FROM: See Below

R. T. Coffman

Sampling & Analytical Services

X7-02/531-0661



200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, MAY 1997, REV 0

REFERENCES:

- BHI, 1996, On-Site Measurements Quality Assurance Plan, BHI-QA-03, Plan 5.2, REV. 1, 1. Bechtel Hanford, Inc., Richland, Washington.
- 2. BHI, 1995, Field Screening Procedures, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
- 3. BHI, 1996, 200-UP-1 Field Screening Support Logbook, EL-1334, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to OC-1 as specified in the reference 1 (BHI 1997). Samples collected and analyzed during May 1997 were managed under SAF C97-013 and C97-015.

Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.29, Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatograph (BHI 1997). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, Kinetic Phosphorescence Analysis of Total Uranium in Water (BHI 1996). Information concerning operation and calibration of the ChemChek KPA-11a is contained in the instrument logbook EL-1335.

OU: 200-UP-1 TSD: N/A Subject Code: 8630 M. A. Buckmaster, H0-19 Page 2

The technetium-99 analyses were conducted at the off-site laboratory of Quanterra Environmental Services Richland Laboratory (QTESRL). The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

Please contact me if you have any questions on this information.

R. T. Coffman, Analyst

R.T. Coffma

RTC:rtc

Attachments:

Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results, May 1997

Attachment 2. Sample Chain of Custody Sheets

Copies:

D. E. Avres, B1-235, w/attachment 1 and 2

- J. V. Borghese, H9-03, w/attachment 1 only
- R. T. Coffman, X7-02, w/attachment 1 and 2
- C. W. Denslow, H9-03, w/attachment 1 only
- B. H. Ford, H0-02, w/attachment 1 only
- I. D. Jacques, L6-06, w/attachment 1 only
- R. B. Kerkow, X7-02, w/attachment 1 only
- S. A. Strope, T7-12, w/attachment 1 only
- D. A. St John, N1-28, w/attachment 1 only
- L. C. Swanson, H9-02, w/attachment 1 only

BHI Document Control, H4-79, w/original attachments

200-UP-1 IRM Implementation Sampling Monthly Groundwater Results, May 1997 SAF C97-013 and C97-015

Sample	HEIS	Sample	Analysis	Chioroform	Carbon Tetracloride	TCE	Uranium	Technetium-99
Location	Number	Date	Date (VOA)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(pCi/L)
299-W19-20	B0K596	5/21/97	NA	NA	NA	NA NA	NA	7310
299-W19-20	BOK595	5/21/97	5/27/97	4.5	200	5.9	1730	NA
299-W19-24	BOK599	5/19/97	NA	NA	NA NA	NA	NA	6430
299-W19-24	B0K598	5/19/97	5/27/97	2.1	75	< 2.0	2860	NA
299-W19-26	BOK5B1	5/20/97	NA	NA	NA	NA	NA	15200
299-W19-26	BOK5BO	5/20/97	5/27/97	4.9	190 ·	<2.0	630	NA
299-W19-28	BOK5B3	5/19/97	NA	NA	NA	NA	NA	14900
299-W19-28	BOK5B2	5/19/97	5/27/97	2.0	12	< 2.0	345	NA
299-W19-29	BOK5B5	5/19/97	NA	NA	NA	NA	NA	156
299-W19-29	BOK5B4	5/19/97	5/27/97	2.9	27	< 2.0	54	NA
299-W19-30	BOK5B7	5/19/97	NA	NA	NA	NA	NA	6880
299-W19-30	BOK5B6	5/19/97	5/27/97	< 2.0	14	< 2.0	550	NA
299-W19-34A	BOK5B9	5/19/97	NA	NA	NA	NA	NA	242
299-W19-34A	BOK5B8	5/19/97	5/27/97	7.6	81	3.6	1.7	NA
299-W19-35	BOK5C1	5/19/97	NA	NA	NA	NA	NA	594
299-W19-35	BOK5CO	5/19/97	5/27/97	<2.0	165	14	45	NA
299-W19-37	BOKBR3	5/20/97	NΑ	NA	NA	NA	NA	1760
299-W19-37	BOK5C2	5/20/97	5/27/97	<2.0	16	< 2.0	835	NA
299-W19-38	BOKBR5	5/20/97	NA	NA	NA	NA	NA	2600
299-W19-38	BOKBR4	5/20/97	5/27/97	4.1	130	< 2.0	200	NA
299-W19-40	BOKBR7	5/20/97	NA	NA	NA	NA	NA NA	401
Duplicate @ 299-W19-40	BOKBR9	5/20/97	NA	NA	NA	NA	NA	401
299-W19-40	BOKBR6	5/20/97	5/27/97	4.4	51	<2.0	140	NA
Duplicate @ 299-W19-40	BOJBR8	5/20/97	5/27/97	4.4	50	<2.0	140	NA
Trip Blank	B0JYN1	5/19/97	5/27/97	< 2.0	< 2.0	< 2.0	NA	NA NA
Trip Blank	воквто	5/21/97	5/27/97	<2.0	<2.0	< 2.0	NA	NA

NA - Not Analyzed

 \boldsymbol{j} - Value less than practical quantitation limit

Analyst:

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685 Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection

Logbook: 200-UP-1 Field Logbook, EL-1334.

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065

Method: Kinetic Phosphorescence

Logbook: 200-UP-1 Field Logbook, EL-1334.

Pacific Northwest Nation Laboratory	al	СН	AIN OF CUSTO	DY/SAM	IPLE AN	NALYSIS	REQ	UEST			C97-013-9	0 Page	1 of i
Collector RZ STEFFLE	I ::H (RFS)		Company Contact J.H. KESSNER	Tele (5	phone No. 09)372-9538			Project Co Stewart,			Data Turnarou Field	nd	
Project Designation 200-UP-1 IRM Groundwater Sar			Sampling Location 200-W					SAF No. C97-013				***	
Ice Chest No. 5/1/2 -	561		Field Logbook No. W	4C-N-	205	#64		Method of Govt. Ve	hicle	.=-			
Shipped To Mobile Laboratory			Offsite Property No.		NA			Bill of Lad	ing/Air Bill l	No.	IVA		.,
POSSIBLE SAMPLE HAZARDS	REMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								
			Type of Container	G/P	Gs*								
			No. of Container(s)	1	1	-							-
Special Handling and/or Storage			Volume	20ml	40ml								ļ
	SAMPLE A	NALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon			·					
Sample No.	Matrix *	Sample Date	Sample Time										
B0K595	Water	MAY 2 1 199	17 1107	X	X				ļ				<u> </u>
				1									
	<u> </u>	<u> </u>							1	1	-	·····	
	<u> </u>												
									<u> </u>				<u> </u>
CHAIN OF POSSESSION		Sign/Print	Names			INSTRUCTION TIVITY EXEM			<u> </u>	<u> </u>	<u> </u>	1	//atrix *
Relinquished By RELINQUISHED RELINQUISHED BY			Date/Ti	me 1335 - 5/22/9 me	<u>-</u> Z							SO SL SU	Sediment Solid Sludge Water Oil Air Drum Solids
Relinquished By	Date/Time	Received By	Date/Ti	ime	1							DL T	Drum Liquid Tissue Wipe
Relinquished By	Date/Time	Received By	Date/Ti	ime								V =	Liquid Vegetation Other
LABORATORY Received By SECTION				Title	.1			<u> </u>		· · · · · ·	Date/Tim	e	
FINAL SAMPLE Disposal Meth	nod					Disposed By					, Date/Tim	e	

Pacific Northwest Nation Laboratory	nal .	СН	AIN OF CUSTO	DY/SAM	IPLE AN	(ALYS)	S REQ	UEST			C97-013-9	3 Page	1 of 1
Collector AG RIZZO	(RFS)		Company Contact J.H. KESSNER		phone No. 09)372-9538			Project Co Stewart,			Data Turnaro Field	und	
Project Designation 200-UP-1 IRM Groundwater Sa	ampling FY1997		Sampling Location 200-W					SAF No. C97-013					
Ice Chest No.	- 497	, <u>-</u>	Field Logbook No.	05 6	س ۲	410 <i>E</i>	51	Method of Govt. Ve					
Shipped To Mobile Laboratory			Offsite Property No.		MIA			Bill of Ladi	ng/Air Bill	No.			
POSSIBLE SAMPLE HAZARD	S/REMARKS		Preservation	HNO3 to pH <2	HCI to pH = 2 Cooled to 4C								
	<i>/</i> ·	<i>هر د</i>	Type of Container	G/P	Gs*								
		,	No. of Container(s)	1	1								_
Special Handling and/or Storago	C.v.	u/ 4°C	Volume	20ml	40ml						_		<u> </u>
	SAMPLE A	Analysis		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon				-		-		
Sample No.	Matrix *	Sample Date	Sample Time		1								
B0K598	Water	MAY 19 1	19/ 1023	-						<u> </u>			<u> </u>
		•											
				ļ ·			-	·		<u> </u>			
	- · · · · ·			<u> </u>			,			<u> </u>			+
CHAIN OF POSSESSION	<u> </u>	Sign/Print		.1	SPECIAL I TOTAL AC	TIVITY EXĖ	MPT		<u> </u>	<u>t.</u>		s	Matrix * Soil Sediment
Relinquished By AG RIZZO (RFS)	Date/Time 1 5 - 15 - 0	113 Received By	Date Ti	me 1413 -19-97		6	·8.					SL W	≃ Solid ≃ Sludge = Water
Relinquished By	Date/Time	Received By										A DS	≃ Oil ≃ Air = Drum Solids
Relinquished By	ished By Date Time Received E			me								Y Wi	Drum LiquidsTissueWipe
Relinquished By	Date/Time	Received By	Date/Ti	me								V	LiquidVegetationOther
LABORATORY Received By SECTION				Title	1	-					Date/Tim	ie	
FINAL SAMPLE Disposal Met DISPOSITION	hod	·····				Disposed By					Date/Tim	īe .	

Pacific Northwest National Laboratory	onal	СНА	AIN OF CUSTO	DY/SAM	1PLE A	NALYS	IS REQ	UEST			C97-013-9	5 Page	l of l
Collector AG RIZZO ((RFS)		Company Contact J.H. KESSNER		ephone No. 509)372-9538	8		Project Co Stewart,		· ·	Data Turnarou Field	nd	
Project Designation 200-UP-1 IRM Groundwater	Sampling FY19		Sampling Location 200-W	**********		***	•••	SAF No. C97-013			·		
Ice Chest No.	493	F	Field Logbook No. ルルC・ルーシ	205 6	-4	PAGE	53	Method of Govt, Ve					
Shipped To Mobile Laboratory			Offsite Property No.		NIA			Bill of Lad	ing/Air Bill I 4)	No.			
POSSIBLE SAMPLE HAZAR	DS/REMARK	s	Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C				T				
			Type of Container	G/P	Gs*								
		~/A	No. of Container(s)	1	1			ļ <u></u> _			<u> </u>		
Special Handling and/or Stora	ge	201400	Volume	20ml	40ml								
	SAMI	PLE ANALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon								
Sample No.	Matrix *		Sample Time		1								
вок5во	Water	MAY 20 199	1 1042	در									
				 		ļ	<u> </u>	-			-	<u> </u>	
	 			-	 			<u> </u>			-		+
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CHAIN OF POSSESSION		Sign/Print Na				INSTRUCT			<u> </u>			s =	Soil Sediment
Relinguished RZZO (RFS)		Received By Received By Received By	/RTClbma_ 5/	ime 1408 20/97	23	6.						SL = W =	Solid Sludge Water
Relinquished By	Date/Time	e Received By	Date/Tin	imė								A -	Oil Air Drum Solids
Relinquished By	Date/Time	e Received By	Date/Tir	ime]							DL -	Drum Liquids Tissue Wipe
Relinguished By	Date/Time	e Received By	Date/Tii	ime	1							L =	Liquid Vegetation Other
LABORATORY Received By SECTION	-			Title	<u> </u>						Date/Time	<u> </u>	
FINAL SAMPLE Disposal Me DISPOSITION	ethod					Disposed B	У				Date/Time		

Pacific Northw Laboratory	est National		. CHA	AIN OF CUSTO	DY/SAM	IPLE A	NALYS	IS REC	QUEST			C97-013-	97 Page	1 of 1
Collector	G RIZZO (RFS	3)		Company Contact J.H. KESSNER		phone No. 509)372-9538	3		Project Co Stewart,			Data Turnaro Field	ound	•
Project Designation 200-UP-1 IRM Gro	oundwater Sampli	ing FY1997		Sampling Location 200-W		•			SAF No. C97-013	3				
Ice Chest No.	me 49	· .		Field Logbook No. といみとール ール	05 C	e/ p	IDGE	51	Method of Govt. V	ehicle				
Shipped To Mobile Laboratory				Offsite Property No.	NIX	·			Bill of Lad	ing/Air Bill /4	No.			
POSSIBLE SAMPL	E HAZARDS/RI	EMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								
		λ	141	Type of Container	GΨ	Gs*								
				No. of Container(s)	1	1								
Special Handling and	d/or Storage	Co	10/406	Volume	20ml	40ml								
		SAMPLE A	NALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chlorenated Hydrocarbon								
Sample No.		Matrix *	Sample Date	Sample Time		1					1			
B0K5B2		Water	MAY 1 9 199	1119	-	4								
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CHAIN OF POSSI Relinquished By AG RIZZO (RFS Relinquished By Relinquished By	NED.	Sign/Print N Received By Received By Received By	Date/Tin	me	5.7	TIVITY EXE						S - SE - SO - SL - W - O - DS - DL - T - WI - L - T	latrix * Soil Sediment Solid Solid Sudge Water Oil Air Drum Solids Drum Liquids Tissue Wipe Liquid	
Relinquished By		Date/Time	Received By	Date/Tir	me					-			V -	Vegetation Other
LABORATORY F	Received By		•		Title							Date/Tin	ne	
FINAL SAMPLE DISPOSITION	Disposal Method						Disposed B	У				. Date/Tin	ie .	

Pacific Northwest Nation Laboratory	nal	СН	AIN OF CUSTO	DY/SAM	IPLE AN	NALYSI	S REQ	UEST			C97-013-99	Page	1 of 1
Collector D.R. BREWINGTO	ON (RFS)		Company Contact J.H. KESSNER	Tele (5	phone No. 09)372-9538			Project Co Stewart,			Data Turnarow Field	ıd	
Project Designation 200-UP-1 IRM Groundwater Sa	ampling FY1997		Sampling Location 200-W					SAF No. C97-013					
Ice Chest No. Gill L # 768			Field Logbook No.	#63				Method of Govt. Ve					
Shipped To Mobile Laboratory			Offsite Property No.			-		Bill of Lad	ing/Air Bill i	No.			
POSSIBLE SAMPLE HAZARD	S/REMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C		Ī						
			Type of Container	G/P	Gs*								
			No. of Container(s)	1	1				-				<u> </u>
Special Handling and/or Storage	;		Volume	20ml	40ml	: 		<u> </u>					
	SAMPLE AN	ALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon			!					
Sample No.	Matrix *	Sample Date	Sample Time]		1						
B0K5B4	Water	5/19/97	1117	V	V _			ļ		ļ <u>-</u>			ļ
													·
CHAIN OF POSSESSION		ISign/Print		ime 1310	ł	TIVITY EXE		1	<u> </u>	<u> </u>		s -	Vatrix * Soil Sediment
Relinguished By LLUIN (TO D.R. BREWINGTON (RFS) Relinquished By	inguished Biscura (To Date/Time Received By D.R. BREWINGTON (RFS) 5/19/97 13/0 RT COFF man / R					4						\$L - W - O - A -	 Solid Sludge Water Oil Air Drum Solids
Relinquished By	Date/Time	Received By	Date/Ti	ime								DL - T - WI -	 Drum Liquids Tissue Wipe
Relinquished By	Date/Time	Received By	Date/Ti	ime								ν -	LiquidVegetationOther
LABORATORY Received By SECTION				Title							Date/Time	L	•
FINAL SAMPLE Disposal Met DISPOSITION	hod					Disposed B	у				Date/Time		

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Pacific Northwest Nat Laboratory		СН	AIN OF CUSTO	DY/SAM	IPLE AN	NALYSIS	REQ	UEST			C97-013-1	01 Page	1 of 1
Collector D.R. BREWING	OTON (RFS) DRB		Company Contact J.H. KESSNER	Tele (5	phone No. 509)372-9538			Project Co Stewart,			Data Turnaro Field	wrd	
Project Designation 200-UP-1 IRM Groundwater			Sampling Location 200-W					SAF No. C97-013					·
Ice Chest No.	1		Field Logbook No.	T #63				Method of Govt. Ve	hicle				
Shipped To Mobile Laboratory			Offsite Property No.			·		Bill of Ladi	ng/Air Bill N	4o.	,		
POSSIBLE SAMPLE HAZA	RDS/REMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								
	,		Type of Container	G/P	Gs*								
			No. of Container(s)	1	1				ļ		<u> </u>		
Special Handling and/or Stor	age		Volume	20ml	40ml								
	SAMPLE ANA	ALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon								
. Sample No.	Matrix *	Sample Date	Sample Time		I.	1							
B0K5B6	Water	5/19/97	0918	1/	V			<u> </u>	<u> </u>				
				-				 					
	1			+							1		
													
CHAIN OF POSSESSION		Sign/Print l	Names			INSTRUCTIO TIVITY EXEM						s -	fatrix * Soil Sediment
Relinquished By D. R. BREWINGTON IN Relinquished By	Date/Time FS) 5/19/17 13/0 Date/Time	Received By RCOFFMA Received By		ime /3/0 5/19/97 ime		LZ.0	>					SO = SL = W = O = A =	Solid Studge Water Oil Air
Relinquished By	Date/Time	Received By	Date/Ti	îme								DL - T - WI -	Drum Solids Drum Liquids Tissue Wipe
Relinquished By	Date/Time	Received By	Date/Ti	ime								V -	Liquid Vegetation Other
LABORATORY Received B	y			Title	1.						Date/Tin	ne	
FINAL SAMPLE Disposal P	Method					Disposed By	·		•		Date/Tin	ne	

Pacific Northwest Natio	onal	СН	AIN OF CUSTO	DY/SAM	PLE AN	NALYS	IS REQ	UEST			C97-013-1	03 Page	1 of 1
Collector D.R. BREWING	TON (원)		Company Contact J.H. KESSNER		phone No. 09)372-9538	}		Project Co Stewart,			Data Turnaro Field	und	
Project Designation 200-UP-1 IRM Groundwater S	ampling FY1997		Sampling Location 200-W					SAF No. C97-013					
Ice Chest No.			Field Logbook No. WHC-N-205	#63				Method of Govt. Ve	hicle				
Shipped To Mobile Laboratory			Offsite Property No.					Bill of Ladi	ng/Air Bill l	No.			
POSSIBLE SAMPLE HAZAR	DS/REMARKS		Preservation	HNO3 to pH <2	HCI to pH <2 Cooled to 4C								
			Type of Container	G-P	Gs*								
	-		No. of Container(s)	1	1				<u> </u>		<u> </u>		
Special Handling and/or Storag	ie		Volume	20ml	40ml								ļ <u></u>
	SAMPLE AN	IALYSIS		URANIUM TOTAL	VOA BY HELD GC Chloronated Hydrocarbon	}							
Sample No.	Matrix *	Sample Date	Sample Time								-		
B0K5B8	Water	5/19/97	1045	V	Ľ		ļ						<u> </u>
							<u> </u>		<u> </u>		-		
								-					
	<u> </u>						 	-	<u> </u>	<u> </u>			
										ļ			
CHAIN OF POSSESSION		Sign/Print			SPECIAL I TOTAL AC	INSTRUCT						S - SE -	Soil Sediment
Relinquished By D. R. BREWINGTON (RFS	Date/Time 5) 5/19/57 13/0 Date/Time	Received By Received By	U/RT Coffma S	ime 1310 5/19/97		61						SL =	Solid Studge Water Oil
								•				A - DS -	Air Drum Solids Drum Liquids
Relinquished By	Date/Time	Received By	Date/T									T -	Tissue Wipe Liquid
Relinquished By	Date/Time	Received By	Date/Ti	imė								V =	Vegetation Other
LABORATORY Received By .SECTION				Title							Date/Tir	ne	
FINAL SAMPLE Disposal Me	ethod			· · · · ·		Disposed E	Зу				Date/Tir	ne	

Pacific Northwest Nationa Laboratory		СНА	IN OF CUSTO	DY/SAM	IPLE ANA	LYSIS RE	QUEST		C97-013-1	Page 1 of
Collector AG RIZZO (RI			Company Contact J.H. KESSNER	Tele	phone No. 509)372-9538		Project Co Stewart,		Data Turnaro Field	und
Project Designation 200-UP-1 IRM Groundwater Sam	oling FY 1997		sampling Location 200-W				SAF No. C97-013			
lce Chest No.	6 493	<u> </u>	ield Logbook No.	05 60	1 1240	E 51	Method of Govt, Ve			
Shipped To Mobile Laboratory			Offsite Property No.		NA		Bill of Lad ペノム	ing/Air Bill No		
POSSIBLE SAMPLE HAZARDS/	REMARKS		Preservation	HNQ3 to pH <2	HCI to pH <2 Cooked to 4C					j
		NICI	Type of Container	G/P	Gs*					
	· · · · · · · · · · · · · · · · · · ·		No. of Container(s)	1	1 10					
Special Handling and/or Storage	Civ	1406	Volume	20ml	40ml					
	SAMPLE ANA	ALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon					
Sample No.	Matrix *	Sample Date	Sample Time							
30K5C0	Water M	AY 19 1997	1218	1	u					
BOJYNI	w	5-19.97	0800	1						
				<u> </u>	-			-		
				<u> </u>						
				 				1		
CHAIN OF POSSESSION		Sign/Print N			SPECIAL INST TOTAL ACTIVI					Matrix * S - Soil SE - Sediment
Relinquished By AG RIZZO (RFS) Relinquished By	Date/Time 1413 5"/9-9", Date/Time	Received By RCOFFM Received By	Date/Time/Date/Time/Time/Time/Time/Time/Time/Time/Tim	me 1413 _ 5-194 me	192					SO - Solid SL - Sludge W - Water O - Oil A - Air
Relinquished By	Date/Time .	Received By	Date/Tir	me	1					DS = Drum Solids DL = Drum Liquid T = Tissue WI = Wipe
Relinquished By	Date/Time	Received By	Date/Tir	me						L = Liquid V = Vegetation X = Other
LABORATORY Received By SECTION				Title					Date/Tin	
FINAL SAMPLE Disposal Method DISPOSITION					Di	isposed By			. Date/Tin	ne

Pacific Northwest Nation Laboratory	nal	СН	IAIN OF CUSTO	DY/SAM	IPLE AN	NALYSI	S REQI	JEST			C97-013-1	07 Page] of j
Collector AG RIZZO (R	(FS)		Company Contact J.H. KESSNER	Tele (5	phone No. 09)372-9538			Project Co Stewart,			Data Turnaro Field	ınd	
Project Designation 200-UP-1 IRM Groundwater Sa	ampling FY1997		Sampling Location 200-W			,		SAF No. C97-013					
Ice Chest No.	- 493		Field Logbook No.	5 64	PAG	6E 57	3	Method of Govt, Ve	hicle				
Shipped To Mobile Laboratory			Offsite Property No.		~/^			Bill of Ladi	ng/Air Bill I 4	No.			
POSSIBLE SAMPLE HAZARD	S/REMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								<u> </u>
i I		NA	Type of Container	GήP	Gs*					<u> </u>	<u> </u>		<u> </u>
<u> </u>			No. of Container(s)	1	1			· ·	ļ	ļ	<u> </u>		<u> </u>
Special Handling and/or Storage	e Cci	1400	Volume	20ml	40ml				<u> </u>				
		ANALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon								
Sample No.	Matrix *	Sample Date	Sample Time					<u> </u>			<u> </u>		
B0K5C2	Water	MAY 20 19	91 0838	v	4				<u> </u>				
				<u> </u>	<u> </u>		<u></u> _		 	-	 		 -
		- 			!				 	 			
				<u> </u>						-	 		
 											 		 -
				<u> </u>		 			 	 	 		
CHAIN OF POSSESSION		Sign/Print	Names	<u> </u>	SPECIAL I TOTAL ACT	NSTRUCTI IIVITY EXEM	APT	<u> </u>	<u> </u>	<u> </u>	<u>.t</u>	s -	latrix * Soil Sediment
Relinquished By (RFS)	Date/Time	408 Received By	AN / RT Collma 5	nc 1408 5/20/97			15.					SO = SL = W =	Solid Sludge Water
Relinquished By	Date/Time	Received By	Date/Tip	ne]							0 - A -	Oil Air Drum Solids
Relinquished By	Date/Time	Received By	Date/Tin	ne								DL - T - WI -	Drum Liquids Tissue Wipe
Relinquished By	Date/Time	Received By	Date/T _i	ne								[V -	Liquid Vegetation Other
LABORATORY Received By SECTION				Title							Date/Tim		
FINAL SAMPLE Disposal Met DISPOSITION	hod	<u> </u>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	<u>_</u>	Disposed By	·	· ·			. Date/Tim	ė	

Pacific Northwest Natio	onal	. СНА	IN OF CUSTO	DY/SAN	IPLE AI	NALYS)	IS REQ	UEST			C97-013-10	9 Page] of]
Collector AG RIZZO) (RFS)		Company Contact J.H. KESSNER	Tele (5	phone No. 509)372-9538	3	····	Project Coo Stewart, I			Data Turnarou Field	nd	
Project Designation 200-UP-1 IRM Groundwater S	Sampling FY1997		ampling Location 200-W					SAF No. C97-013					
Ice Chest No.	inch 493	Fi	ield Logbook No. LUIAL - pri - c	205	44_1	246€	53	Method of S Govt, Vel					
Shipped To Mobile Laboratory		О	Offsite Property No.	NI				Bill of Ladi		No.	-		
POSSIBLE SAMPLE HAZAR	DS/REMARKS		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C								
	\sim /	A	Type of Container	G/P	Gs*								
			No. of Container(s)	1	1			Ţ <u> </u>			1		ļ
Special Handling and/or Storag	ge	406	Volume	20ml	40ml	<u></u>		<u></u>					
	SAMPLE ANA	ALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon								
Sample No.	Matrix *	Sample Date	Sample Time							1	<u> </u>		
BOKBR4	Water M	AY 20 1997	0920	-	سب ا		<u> </u>			1	 +		
			 					-					
													<u> </u>
				 	 	<u> </u>	 	+			 		
CHAIN OF POSSESSION		Sign/Print Na		<u> </u>		INSTRUCT		.1	I	<u> </u>	<u> </u>	s -	[atrix * Soil Sediment
Relinquished By AG RIZZO (RFS) Relinquished By	Date/Time 1405	Received By Received By	PTC4fma 5/2 Date/Ti	ime 1408 20/47 ime		133,						SL = W = O = A =	Solid Studge Water Oil Air Drum Solids
Relinquished By	Date/Time	Received By	Date/Tii	ime] .							DL - T - WI -	Drum Liquids Tissue Wipe
Relinquished By	Date/Time	Received By	Date/Ti	ime]							V -	Liquid Vegetation Other
LABORATORY Received By SECTION	· · · · · · · · · · · · · · · · · · ·	<u> </u>		Title	. 						Date/Time		
FINAL SAMPLE Disposal Me	thod					Disposed By	у				Date/Time	;	

Pacific Northwest Natio	onal		СНА	IN OF CUSTO	DY/SAM	IPLE AN	NALYSI	IS REQ	UEST			C97-013-11	1 Page] of]
Collector AG RIZZO (F	RFS)		C	ompany Contact J.H. KESSNER		nhone No. 09)372-9538			Project Co- Stewart,			Data Turnarou Field	nd	
Project Designation 200-UP-1 IRM Groundwater S	Sampling FY1	997	Sa	ampling Location 200-W					SAF No. C97-013					
Ice Chest No.	n L 499	3	F	ield Logbook No. ルリC・ルーシュ	5 64	JAGE	ر س	>	Method of Govt, Ve					
Shipped To Mobile Laboratory			О	ffsite Property No.	NA	•			Bill of Ladi	ng/Äir Bill I ‡	No.			
POSSIBLE SAMPLE HAZAR	DS/REMARK	(S		Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C						1 1		
		~/,	1	Type of Container	G/P	Gs*								
				No. of Container(s)	1	1								
Special Handling and/or Storag	!e	000/40	(Volume	20ml	40ml		<u> </u>						ļ <u>. </u>
	SAM	PLE ANALYSIS			URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon								
Sample No.	Matrix	* Sam	ple Date	Sample Time						_				
BOKBR6	Water	MAY 2	0 1997	1117	<u></u>	U		<u> </u>	 					
	<u></u> .								 				···-	
CHAIN OF POSSESSION Relinquished By	Date/Tim		Sign/Print Na		ne /408	SPECIAL I TOTAL ACT	NSTRUCTI		<u> </u>	l	<u> </u>		S SE SO	Matrix * Soil Sediment Solid Sludge
Relinquished By AG RIZZO (RFS) Relinquished By	Date/Tim	ne Receive	of FM AN/	RT Coffma 57 Date Tir	20/97 ne								W - O - A -	Water Oil Air Drum Solids
Relinquished By	Date/Tim	ne Receive	ed By	Date/Tir	ne								DL - T - Wi -	Drum Liquids Tissue Wipe
Relinquished By	Date/Tim	ne Receive	ed By	Date/Tir	me								/ V -	Liquid Vegetation Other
LABORATORY Received By SECTION		<u></u> l			Title	L						Date/Time		
FINAL SAMPLE Disposal Me	thod				<u> </u>		Disposed By	<i>,</i>				Date/Time	<u> </u>	

Pacific Northwest National Laboratory	ıl	CH	HAIN OF CUSTODY/SAMPLE ANALYSIS REQ						UEST			C97-013-113 Page 1 of 1			
Collector AG RIZZO (RF	S)	Company Contact Telephone No. J.H. KESSNER (509)372-9538					Project Co Stewart,	Data Turnaro Field	ata Turnaround Field						
Project Designation 200-UP-1 IRM Groundwater San	Sampling Location 200-W					SAF No. C97-013									
ice Chest No.	493	Field Logbook No. LUHC-N-2-05 64 PACE 5-3					Method of Shipment Govt. Vehicle								
Shipped To Mobile Laboratory	Offsite Property No.					Bill of Lading/Air Bill No.									
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C					<u> </u>	<u> </u>		<u> </u>		
			Type of Container	G/P	Gs*	<u></u>	<u> </u>			ļ	 		<u> </u>		
			No. of Container(s)	1 - 20 :	1		ļ	<u> </u>		ļ			ļ		
Special Handling and/or Storage		cool 4°C	Volume	20ml	40ml			. <u> </u>							
	SAMPLE	ANALYSIS		URANIUM TOTAL	VOA BY FIELD GC Chloronated Hydrocarbon										
Sample No.	Matrix *	Sample Date	Sample Time						1	1	1				
BOKBR8	Water	MAY 2019	97 117	<u></u>			 		 -	<u> </u>	-		 		
					<u> </u>	<u> </u>	 		 	 -	-		 		
				 		<u> </u>	 			 -	1		<u> </u>		
				1											
	· 				CONTRACT OF				<u> </u>			, , , , , , , , , , , , , , , , , , , 	atrix *		
CHAIN OF POSSESSION	Names	SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT								s -	Soil Sediment				
Relinquished By AG RECeived By AG RIZZO (RFS) By State Control of the Received By RT Coffm			Date Tir								SO = SL = W =	Solid Sludge Water			
Relinquished By	Date/Time	Received By	Date/Tir	me								DS =	Oil Air Drum Solids		
Relinquished By	Date/Time	Received By	Date/Tir	ne								DL -	Drum Liquid Tissue Wipe		
Relinquished By	Date/Time	Received By	Date/Tii	ne	1							V -	Liquid Vegetation Other		
LABORATORY Received By , SECTION		L		Title	<u> </u>						Date/Tim	<u> </u>			
FINAL SAMPLE Disposal Metho DISPOSITION	d					Disposed B	у				. Date/Tim	e			

Pacific Northwest Nation Laboratory	nal	Сн	IAIN OF CUSTODY/SAMPLE ANALYSIS REC					QUEST			C97-013-11	5 Page	1 of 1	
Collector AZ STEFFLER (F	Company Contact Telephone No. J.H. KESSNER (509)372-9538					Project Coordinator Stewart, DL			Data Turnaround Field					
Project Designation 200-UP-1 IRM Groundwater Sa	Sampling Location 200-W					SAF No. C97-013								
Ice Chest No.	Field Logbook No. WHC-N-205 #65					Method of Shipment Goy /ehicle Bill of Lading/Air Bill No. /								
Shipped To Mobile Laboratory	Offsite Property No.					Bill of Lading/Air Bill No.								
POSSIBLE SAMPLE HAZARD	Preservation	HCl to pH <2 Cooled to 4C			<u> </u>		<u> </u>							
		Type of Container	Gs*			<u> </u>	ļ			-		ļ		
			No. of Container(s)	'		·	J						<u> </u>	
Special Handling and/or Storage			Volume	40ml					į					
	SAMPLE AI	NALYSIS		VOA BY FIELD GC Chloronated Hydrocarbon										
Sample No.	Matrix *	Sample Date	Sample Time]							
воквто	Water	MAY 2119	97 0750	X									<u> </u>	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		ļ		<u> </u>	<u> </u>	<u> </u>	<u> </u>	 -			<u> </u>	
				<u> </u>		ļ. <u></u>				_	 			
						 		+	<u> </u>	-	+			
												—		
					CDECIAL	INSTRUCT	TONE					1 N	atrix *	
CHAIN OF POSSESSION	HAIN OF POSSESSION Sign/Print Names					TOTAL ACTIVITY EXEMPT s - Soil								
STEPPLER (RFS)	Date/Time /735 Received By Date/Time /335 5-22-97 RT COFFMAN/RT Offman 5/22/97					FAX copies of log-in to DL Stewart (372-1704) & JM Duncart (372-9052) SE - Sediment SO - Solid SL - Sludge W - Water								
Relinquished By	Date/Time	Received By	Date/Ti	me								A -	Oil Air Drum Solids	
Relinquished By	Date/Time	Received By	Date/Ti	me								DL = T = WI =	Drum Liquids Tissue Wipe	
Relinquished By	Date/Time	Received By	Date/Ti	me							•) v -	Liquid Vegetation Other	
LABORATORY Received By SECTION				Title	<u> </u>				·		Date/Time			
FINAL SAMPLE Disposal Meth	od					Disposed B	у	·	<u> </u>	····	Date/Time			